

# **2012 Consumer Confidence Report Chestnut Ridge System**

## **Is my water safe?**

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

## **Do I need to take special precautions?**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline (800-426-4791).

## **Where does my water come from?**

The Chestnut Ridge Water System obtains its water from the Chestnut Ridge Reservoir, located off Webb Road in Bethel. The Chestnut Ridge System serves approximately 3000 customers on the Southeast side of town. There are approximately 7.1 miles of water mains in the system. Three storage tanks hold roughly 275,000 gallons. In 2012 the Chestnut Ridge Plant produced 64,462,000 gallons. Average daily production was just under 177,000 gallons. The Chestnut Ridge Plant is a conventional rapid sand treatment plant. Treatment is accomplished through coagulation, flocculation, sedimentation and filtration. Polyaluminium Chloride is used for coagulation purposes, soda ash (sodium carbonate) is used for pH adjustment and liquid chlorine is used for disinfection. A blended phosphate is used for corrosion control and sequestering purposes. In 2012 several valves were replaced in the Chestnut Ridge Plant and several older valves were uncovered. A new entry alarm system was installed at the Chestnut Ridge Plant and modifications were made to the overflow line at the Hoyt's Hill Storage Tank.

## **Source water assessment and its availability**

A Source Water Assessment of the Chestnut Ridge Watershed was recently conducted by the Department of Public Health's Drinking Water Division. The assessment report can be found on the DPH's website at <http://www.dph.state.ct.us/BRS/Water/SourceProtection/Assessments/Assessments.html>. The assessment found that this drinking water source has an overall susceptibility rating of LOW, to potential sources of contamination. Additional source water assessment information can be

found at the Environmental Protection Agency's website at [www.epa.gov/safewater/protect/swap.html](http://www.epa.gov/safewater/protect/swap.html).

### **Why are there contaminants in my drinking water?**

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline (800-426-4791).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity: microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming; pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

### **How can I get involved?**

Public Utility Commission meetings are generally held on the first Monday of each month, in Meeting Room A, at the Municipal Center. Water related issues can be addressed at this time. The current Utility Commissioners are; Matthew Knickerbocker, Richard Straiton, Paul Szatkowski, Michael Gribbin and Peter Valenti. Current Utility Department employees include: Kelly Curtis, Water Superintendent, Edward Knapp, Chief Plant Operator, Chris Hall, Richard Benzing, Norman Cook, Chris McCollam and Chris Cudzillo, all Water and Sewer Maintainers. Copies of this report are available in the Public Works Office and this report is published on the Town Of Bethel's website at [Bethel-ct.gov.com](http://Bethel-ct.gov.com).

### **Additional Information for Lead**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Chestnut Ridge System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize

the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

## Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

| <u>Contaminants</u>  | <u>MCLG<br/>or<br/>MRDLG</u> | <u>MCL,<br/>TT, or<br/>MRDL</u> | <u>Your<br/>Water</u> | <u>Range</u><br><u>Low</u>   <u>High</u> |       | <u>Sample<br/>Date</u> | <u>Violation</u> | <u>Typical Source</u>  |
|--|------------------------------|---------------------------------|-----------------------|--|-------|------------------------|------------------|--|
| <b>Disinfectants &amp; Disinfectant By-Products</b>  |                              |                                 |                       |  |       |                        |                  |  |
| (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)  |                              |                                 |                       |  |       |                        |                  |  |
| Chlorine (as Cl <sub>2</sub> ) (ppm)   | 4                            | 4                               | 2.85                  | 1.63                                     | 2.85  | 2012                   | No               | Water additive used to control microbes  |
| Haloacetic Acids (HAA5) (ppb)  | NA                           | 60                              | 22                    | 0  | 133.5 | 2012                   | No               | By-product of drinking water chlorination  |
| TTHMs [Total Trihalomethanes] (ppb)  | NA                           | 80                              | 50                    | 7.4                                      | 150.8 | 2012                   | No               | By-product of drinking water disinfection  |
| Total Organic Carbon   | NA                           | TT                              | NA                    | NA                                       |       | 2012                   | No               | Naturally present in the environment   |
| <b>Inorganic Contaminants</b>  |                              |                                 |                       |  |       |                        |                  |  |
| Sodium (optional) (ppm)  |                              | 28                              | 26.5                  | NA                                       |       | 2012                   | No               | Erosion of natural deposits; Leaching  |
| Barium (ppm)   | 2                            | 2                               | 0.01                  | NA                                       |       | 2012                   | No               | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| <b>Microbiological Contaminants</b>  |                              |                                 |                       |  |       |                        |                  |  |
| Turbidity (NTU)  | NA                           | 0.3                             | 100                   | NA                                       |       | 2012                   | No               | Soil runoff  |
| 100% of the samples were below the TT value of 0.3. A value less than 95% constitutes a TT violation. The highest single measurement was 0.12. Any measurement in excess of 1 is a violation unless otherwise approved by the state. |                              |                                 |                       |  |       |                        |                  |  |

|  |             |           |                       |                        |                                   |                       |  |   |
|--|-------------|-----------|-----------------------|------------------------|-----------------------------------|-----------------------|--|---|
| Total Coliform<br>(positive<br>samples/month)      | 0           | 1         | 0                     | NA                     |                                   | 2012                  | No   | Naturally present in the<br>environment |
|  |             |           |                       |                        |                                   |                       |  |   |
| Radioactive Contaminants                           |             |           |                       |                        |                                   |                       |  |   |
| Radium (combined<br>226/228) (pCi/L)               | 0           | 5         | 0.37                  | 0.37                   | 0.92                              | 2010                  | No   | Erosion of natural deposits             |
| <u>Contaminants</u>                                | <u>MCLG</u> | <u>AL</u> | <u>Your<br/>Water</u> | <u>Sample<br/>Date</u> | <u># Samples<br/>Exceeding AL</u> | <u>Exceeds<br/>AL</u> | <u>Typical Source</u>  |   |
| Inorganic Contaminants                             |             |           |                       |                        |                                   |                       |  |   |
| Copper - action level<br>at consumer taps<br>(ppm) | 1.3         | 1.3       | 0.4                   | 2010                   | 0                                 | No                    | Corrosion of household<br>plumbing systems; Erosion<br>of natural deposits |   |
| Lead - action level at<br>consumer taps (ppb)      | 0           | 15        | 4                     | 2010                   | 0                                 | No                    | Corrosion of household<br>plumbing systems; Erosion<br>of natural deposits |   |

## Undetected Contaminants

The following contaminants were monitored for, but not detected, in your water.

| <b><u>Contaminants</u></b>              | <b><u>MCLG<br/>or<br/>MRDLG</u></b> | <b><u>MCL<br/>or<br/>MRDL</u></b> | <b><u>Your<br/>Water</u></b> | <b><u>Violation</u></b> | <b><u>Typical Source</u></b>   |
|---|-------------------------------------|-----------------------------------|------------------------------|-------------------------|--|
| Alpha emitters (pCi/L)                  | 0                                   | 15                                | ND                           | No                      | Erosion of natural deposits  |
| Uranium (ug/L)                          | 0                                   | 30                                | ND                           | No                      | Erosion of natural deposits  |
| Nitrate [measured as<br>Nitrogen] (ppm) | 10                                  | 10                                | ND                           | No                      | Runoff from fertilizer use; Leaching<br>from septic tanks, sewage; Erosion of<br>natural deposits                                  |
| Nitrite [measured as<br>Nitrogen] (ppm) | 1                                   | 1                                 | ND                           | No                      | Runoff from fertilizer use; Leaching<br>from septic tanks, sewage; Erosion of<br>natural deposits                                  |
| Fluoride (ppm)                          | 4                                   | 4                                 | ND                           | No                      | Erosion of natural deposits; Water<br>additive which promotes strong teeth;<br>Discharge from fertilizer and aluminum<br>factories |
| Copper - source water<br>(ppm)          |                                     | MPL                               | ND                           | No                      | Corrosion of household plumbing<br>systems; Erosion of natural deposits  |
| Lead - source water (ppm)               |                                     | MPL                               | ND                           | No                      | Corrosion of household plumbing<br>systems; Erosion of natural deposits  |

| <b>Unit Descriptions</b> |  |
|--------------------------|--|
| <b>Term</b>              | <b>Definition</b>  |
| ug/L                     | ug/L : Number of micrograms of substance in one liter of water |
| ppm                      | ppm: parts per million, or milligrams per liter (mg/L)         |
| ppb                      | ppb: parts per billion, or micrograms per liter (µg/L)         |
| pCi/L                    | pCi/L: picocuries per liter (a measure of radioactivity)       |

|                        |  |
|------------------------|--|
| NTU                    | NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. |
| positive samples/month | positive samples/month: Number of samples taken monthly that were found to be positive   |
| NA                     | NA: not applicable   |
| ND                     | ND: Not detected   |
| NR                     | NR: Monitoring not required, but recommended.  |

| Important Drinking Water Definitions |   |
|--------------------------------------|---|
| Term                                 | Definition  |
| MCLG                                 | MCLG: Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.  |
| MCL                                  | MCL: Maximum Contaminant Level: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.   |
| TT                                   | TT: Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.  |
| AL                                   | AL: Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.   |
| Variances and Exemptions             | Variances and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.   |
| MRDLG                                | MRDLG: Maximum residual disinfection level goal. The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants. |
| MRDL                                 | MRDL: Maximum residual disinfectant level. The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.                              |
| MNR                                  | MNR: Monitored Not Regulated  |
| MPL                                  | MPL: State Assigned Maximum Permissible Level   |

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